# Clark ADJUSTABLE CUTTING TOOLS





Vise-grip jaw runs full length of cutter channel.

#### Positive Tool Bit Rigidity Means Higher Speeds, Faster Feeds, Deeper Cuts!

Exclusive, adjustable vise-grip jaw exerts equalized pressure over *full* length of cutter channel. Instead of a different tool holder for every size of tool bit, equalizing grip of Clark Tool Holder rigidly secures, both vertically and horizontally, any size or shape of tool bit within

capacity of holder.

Clark Ádjustable Tool Holders are drop forged, heat treated and hardened for maximum resistance to mushrooming and wear. This extra strength, together with equalized pressure, prevents wear in channel immediately below set screw. Set screw is National standard thread. In addition to Clark Adjustable Tool Holders with standard 15° cutter channel, there are Clark Parallel Adjustable Tool Holders for carbide bits, threading tools, and boring bars.

#### Only the Clark Lathe Tool Holder Has ALL These Features:

- 1. Each tool holder takes 4 or more sizes of square or round tool bits.
- 2. Vise-grip jaw rigidly clamps short tool bits and stub ends.
- Firmly holds dual and narrow tool bits for cutting-off or special forming operations.
- Tilted position of head gives operator unobstructed view of cutting edge.
- Vise-grip securely holds and supports carbide bits, threading tools and boring bars. Protruding underlip prevents breakage.

LEFT HAND No.	RIGHT HAND No.	SIZE OF HOLDER	SIZE OF CUTTERS	A.S.A. STANDARD TOOL POST OPENINGS WIDTH INCHES	APPROX, SIZE OR SWING OF LATHES (Check Tool Post Opening for Correct Shank Size)	APPROX. WEIGHT EACH	PRICE
			STANDARD 1,5° CUTTER	CHANNEL	· Market and		
60L 61L 62L 64L	60R 61R 62R 64R	3/8 x 7/8 x 5/2 1/2 x 11/8 x 61/2 5/8 x 11/2 x 8 1/8 x 17/8 x 91/2	1/8 3/6 1/4 3/6 3/6 3/6 3/6 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/8 3/6 3/2 3/6 3/6 3/6 3/6 3/6 3/6 3/6 3/6 3/6 3/6	1/2 or 1/6 11/6 or 13/6 13/6 or 1 13/6 or 13/8	7 to 12 inches 12 to 16 inches 16 to 20 inches 20 to 40 inches	3/4 # 11/2 # 21/2 # 51/4 #	\$ 6.55 7.50 9.15 11.20
		PARA	ALLEL CUTTER CHANNEL—For Carbide Tools	, Boring Bars, and Thre	eading Tools		
P60L P61L P62L P64L	P60R P61R P62R P64R	3/8 x 1/8 x 5/2 1/2 x 11/8 x 6/2 5/8 x 11/2 x 8 1/8 x 11/8 x 9/2	1/8 3/6 1/4 3/6 3/8 1/4 3/6 3/8 1/4 3/6 3/8 1/4 3/6 3/8 1/4 3/8 3/6 1/2 3/8 3/6 3/8 3/6 3/8 3/6 3/8 3/8 3/8 3/8 3/8 3/8 3/8 3/8 3/8 3/8	1/2 or %6 11/6 or 13/6 13/6 or 1 13/6 or 13/8	7 to 12 inches 12 to 16 inches 16 to 20 inches 20 to 40 inches	3/4 # 13/4 # 23/4 # 6 #	\$ 7.25 8.25 9.85 12.40

#### Clark LEVER-LOCK BORING BARS . . .



	RING B	ARS COMPLETE		BLANK BITS (Unground) SOLD ONLY IN STANDARD PACKAGES OF ½ DOZEN OF A NUMBER			BORING BITS (Precision Ground) SOLD ONLY IN STANDARD PACKAGES OF ½ DOZEN OF A NUMBER					ES	THREAD CUTTING BITS (Precision Ground Packed 1-2 doz per size			
				PRICE		STEE	H SPEED L (18-4-1 ungsten)	STEE	H SPEED L (18-4-1 ngsten)		CAR ACHINING STEEL		CHINING	STEE	HIGH SPEED STEEL (18-4-1 Tungsten)	
BORING BAR NO.		IN.		HIGH SPEED	DIAM. BITS	NO.	PRICE PER DOZ.	NO.	PRICE PER DOZ.	NO.	PRICE PER DOZ.	NO.	PRICE PER DOZ.	NO.	PRICE PER DOZ.	
951 952 953 954 959	3/6 1/4 3/8 1/2 Set of	5 6 7 8 Four Ba	P60R, P61R P60R, P61R, P62R P61R, P62R, P64R P62R, P64R rs in Wood Box	\$2.25 2.25 2.50 2.85 8.70	322 188 316 14	10.951 10.952 10.953 10.954	\$1 44 1 44 1 92 2 40	13.951 13.952 13.953 13.954	\$6 24 6.24 7 20 8 64	15.951 15.952 15.953 15.954	36.00	14-951 14-952 14-953 14-954	\$21.60 24.00 36.00 60.00	16-951 16-952 16-953 16-954	\$6.24 6.24 7.20 8.64	

"P" Series
Tool Holders
rigidly hold
boring bars,
carbide bits or
thread tool bits.

round tool bits.

Exclusive Clark Lever-Lock securely grips tool bit.



#### CLARK HOLE CUTTERS CUT ACCURATE, CLEAN HOLES QUICKLY!

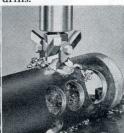
Cutter blades are replaceable, easy to sharpen, easy to set

Finished cuts the first time in boiler plate, pipe, plastics, hard fibre, stainless steel, Transite, and other problem materials—no after grinding or chipping necessary. Body is made from carefully selected, heat-treated steel and consists of a tapered or straight shank into which are set 3 high-speed steel blades spaced 120° apart. Clark Hole Cutter is simple to adjust, yet performs more efficiently and has longer life than fixed radius cutters of same size. Models cover variable expansions from 3/8 to 5" holes and have thickness capacities from thin sheets to 1". All Clark Hole Cutters will cut clean holes through curved surfaces—in pipe, tanks, cylinders, etc., but models 4C and 5C are specially designed for this purpose. Pilots are removable to permit the use of lead drills.









NO. OO WITH RETRACTABLE PILOT CUTTING PLASTICS

IN PORTABLE DRILL EASILY CUTS STEEL PLATE

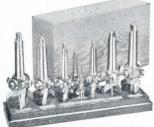
WITH SPECIAL PILOT FOR DEEP HOLES

CLEAN HOLES IN PIPE

Model No.	Expansion Capacity	Designed for:	Thickness Capacity		H. S. Blade Size	Pilot Size	Efficient in:	Recommended Speed	Ship. Wt.	Price	Ex. Blade Set of 3
00	5/8"-11/4"	Small Holes, Light Work	1/8"	†3/8" SS* or No. 1 MT	3/16"	½" (Drill)	Electric Drill	500 R.P.M. or Less	1 lb.	\$10.00	\$1.50
0	3/4"-11/2"	Small Holes, Light Work	1/4"	3/8" SS* or 1/2" SS or No. 2 MT	1/4"	3/6"	,	500 R.P.M. or Less	1	10.00	1.50
1	1"-21/2"	Sheet Metal, Plastics, Hard Fibre, Etc.	1/4"	1/2" SS* or 2 or 3 MT	5/16"	1/4"	Light Drill Presses	500 R.P.M. or Less	11/2 -	15.00	3.00
2	11/2"-3"	Sheet Metal, Air- craft, Elec. Shops	1/2"	No. 2* MT No. 3 MT	3/8"	3/8"	Electric Drills Pneumatic Drills	100 to 500 R.P.M. in Air Motor	21/4	18.00	4.00
3	2"-31/2"	Port. Drilling, on Bulkh'ds, Deck Plates	5/8"	1/2" SS or No. 2* or No. 3 MT	7/6"	3/8"	Light Drill Presses	100 to 500 R.P.M. in Air Motor	23/4	20.00	4.50
4	21/2"-4"	Ship Deck Plates and Boiler Shops	3/4"	No. 4 MT	1/2"	3/8"	Portable Motor	100 to 500 R.P.M. in Portable	33/4	25.00	5.00
4-C	11/2"-3"	Curved Surfaces— Pipe, Tanks, Etc.	1/2"	No. 4 MT	1/2"	3/8"	Heavy Drill Press	50 to 125 R.P.M. in Drill Press	33/4	25.00	5.00
5	3"-5"	Heavy Duty	1"	No. 4 MT	5/8"	1/2"		40 to 100 R.P.M. in Drill Press	51/4	30.00	7.50
5-C	21/2"-4"	Curved Surfaces— Pipe, Tanks, Etc.	3/4"	No. 4 MT	5/8"	1/2"	Heavy Drill Presses	40 to 100 R.P.M. in Drill Press	51/4	30.00	7.50

 $\pm \frac{1}{4}$ " or  $\frac{1}{2}$ " straight shank is optional on the #00.

Carbide tipped blades can be provided for non-ferrous metals and plastics, wood, fibre, hard rubber, etc., when required. Prices on application.



Set No. HC \$183.00



Set No. CD3 \$54.00

### Clark HOLE CUTTER SETS

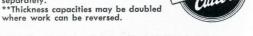
Set No. HC consists of one each Hole Cutter No. 00 to 5C, incl., as listed above, mounted in convenient wood crib box. Shipping weight 37 lbs......\$183.00 Set No. HCX is same as the HC set and includes one set of extra blades for each tool. Shipping Set No. HCXG with Grinding Fixture.† Shipping weight 45 lbs......\$245.00 +Clark Grinding Fixture Model C simplifies grinding and assures accuracy in resharpening Clark Hole Cutter Blades.

Set No. CD3—(Illustrated at lower left and described below).....complete \$54.00

Set includes one each of these tools with an extra set of factory-sharpened blades for each tool and an Allen wrench for No. 00. Packed in a sturdy cribbox that prevents damage to blades, pilots, and shanks.

Model No.	Shank	Expansion Capacity*	Thickness Capacity**
00	3/8 S.S.	5/8"-11/4"	1/8"
1	1/2 S.S.	1"-21/2"	1/4"
3	1/2 S.S.	2"-31/2"	5/8"

\*Other Clark Cutters covering diameters to 10" or more may be purchased separately.



#### ADJUSTABLE CUTTING TOOLS FOR ALL MATERIALS

Copyright 1945 R.H.C. Co. Prices apply only in U.S.A. Patents have been issued or are pending on all Clark Cutters in this catalog.

<sup>\*</sup>Note: Where there is a choice of shank sizes, those marked with an asterisk will be shipped unless otherwise specified. Shank sizes not listed will be quoted on request. There is an extra charge for spring action retractable pilots or for pilots larger than standard.



### @ Clark

### 3-BLADE ADJUSTABLE FACE MILLING CUTTER

An efficient tool for surface facing in horizontal or vertical milling machines. Ideal as an emergency repair tool, for dressing castings of any metal, and many other end mill, facing mill and slab mill operations. Easy to reshar en and renew the blades.

WITH THREE HIGH-SPEED STEEL BLADES

Model No.	Expansion Capacity	Standard Size Shanks Specify Size & Type	Blade Size	Price Each	Extra H.S. Blades Set of 3	Carbide Tipped Blades Set of 3
11	11/4-21/2"	No. 7* B&S or No. 2 Morse Taper	3/6"	15.00	3.00	8.40
12	11/2-3"	No. 9* B&S or No. 3 Morse Taper	3/8"	18.00	4.00	8.55
14	21/2-4"	No. 10* B&S or No. 4 Morse Taper	1/2'	25.00	5.00	9.60
15	3 -5"	No. 11* B&S or No. 4 Morse Taper	5/8"	30.00	7.50	10.50

When No. 20, No. 30, No. 40 or No. 50 M.M. Standard Tapers are required, we recommend the use of adapter sleeves, or we can provide tools with these special shanks for \$38.00 extra.

SET NO. SF consists of one of each Face Milling Cutter listed above, mounted in wood crib box to protect blades and shanks.

Shipping Weight 15 Lbs.

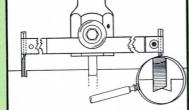
\*NOTE: When shank specification is not given, B & S shanks will be shipped.
Models 12, 14, 15 equipped with B&S
Tapers are fitted with 1½" deep draw bar hole 1½"-13RH Thread.





# ©Clark ADJUSTABLE FLY CUTTERS

Cut quick, clean, large-diameter holes or discs from metals, plastics, and hard-towork materials.



Cut all diameters from 2½ to 10 inches with only 2 models. 1" thickness capacity.

Unique angles at which blades are held and new grinding technique prevents chatter. Shank is heat-treated, pilot is hardened and ground.

Model No	22	25
Expansion Capacity	21/2"-5"	4"-10"
Thickness Capacity		1"
Shank Size	1/2" SS or No. 2 or	No. 3 or 4
Snank Size	( 3 M.T.	Taper
Pilot Size	1/4"	1/2"
Shipping Weight	41/4 lbs.	7 lbs.
Price, Each with H.S. Blades	\$22.50	\$30.00
Extra H.S. Blades, set of 2 Extra Carbide Blades (A Grade),	\$ 5.00	\$ 5.00
set of 2	\$ 7.50	\$ 7.50

## ©Clark THREAD TOOL GRINDING FIXTURES



Fixed angles for 29° or 60° thread tool bits ... rough or fine thread.

No graduated scales or moving parts to wear out. Every compound angle exactly determined to provide correct thread angle and clearance.

Models A and B. Guaranteed tolerance ±5 minutes in grinding both National 60° and Acme 29° left or right hand or straight thread tool bits! May be used on any surface or cutter grinder. Used with magnetic chuck, or clamps to work table.

Model C. Faces pitched at special angles for sharpening Clark 3-Blade Hole Cutter blades.

MODEL	SIZE	CAPACITY	WEIGHT	PRICE With Adaptors
A B B-1	2 <sup>3</sup> / <sub>8</sub> "×2 <sup>1</sup> / <sub>8</sub> "×1 <sup>5</sup> / <sub>8</sub> " 3 <sup>3</sup> / <sub>4</sub> "×4 <sup>1</sup> / <sub>8</sub> "×3 <sup>1</sup> / <sub>2</sub> " 3 <sup>3</sup> / <sub>4</sub> "×4 <sup>1</sup> / <sub>8</sub> "×3 <sup>1</sup> / <sub>2</sub> "	1/8"-3/8" bits 1/8"-5/8" bits 1/2"- 1" bits	1½ lbs. 6½ lbs. 7½ lbs.	\$16.75 35.00 45.00
C	For Clark Hole Cutter Blades	3/6"-5/8" bits	31/2 lbs.	22.50



©Clark
2-BLADE
ADJUSTABLE
GASKET
CUTTER

Cuts Inside and Outside Circles at the same time!

Cuts gaskets from thin or flexible material including fibre, plastics, live rubber, and similar products. Equipped with two high-speed steel knife-like blades and a spring action retractable pilot. A disc with center for pilot point to rest in serves as a clamp to hold flexible material in position and prevents damage to the center of work. Discs are not furnished with the tool.

Model No	22-G	25-G
Expansion Capacity, ins.	21/2"-5"	4"-10"
Morse Taper Shank Size		No. 3 or 4
Retractable Pilot Size	1/4"	1/2"
Price, Each	\$22.50	\$30.00
Extra Blades Set of 2	5.00	5.00



Adjustable Cutting Range 1/4" to 51/2"

Cuts fast...no chatter...no burr-locked pilots! No more "specials"-Clark Counterbores cut all fractional diameters. Each tool does the work of 7 or more fixed-radius cutters, thereby reducing tool inventory costs. Removable blades are easy to sharpen. Exclusive burr-preventing interchangeable pilots available from 3/16" up, by sixteenths. Pilot pin and one minimum size bushing pilot provided with each tool. Chip clearance allows greater feed and R.P.M. speeds.

		DATA	ICATION	SPECIF		BLADES	AST ALLOY	WITH O	BLADES	HIGH-SPEED	WITH F
Size of Pilo Furnished with Tool	Pilot Sizes Bushing Type	Range of Pin Type	Diam. of Pilot Pin	Standard Shank Size	Cutting Range Outside Diameter†	Extra Blades Set of 2	Price Each	Tool No.	Extra Blades Set of 2	Price Each	Tool No.
102 - 3/6"		3/2 to 3/6	3/6	1/4 SS	1/4 to %				\$1.00‡	\$6.00	40-H
1048-1/4"	1/2 to 1/16	3/16 to 1/16	3/16	14 or 38 *SS or 1 MT	% to 3/4	\$7.50	15.00	41B-C	2.50	10.00	41B-H
112 - 1/2"	1/2 to 15/16	1/4 to 1/6	1/4	1/2* SS or 1 MT	3/4 to 1	8.00	17.50	42B-C	3.00	12.50	42B-H
112 - 1/2"	1/2 to 15/16	3/8 to 7/6	1/4	1/2* SS or 1 MT	1 to 13/8	8.50	20.00	43B-C	3.50	15.00	43B-H
113 - 3/6"	% to 115/16		1/4	2 *MT or 3 MT	13/8 to 2	15.00	25.00	44-C	5.00	17.50	44-H
116 - 3/4"	3/4 to 27/6		1/4	3 MT	2 to 21/2	15.00	30.00	45-C	6.50	21.50	45-H
122 - 11/16	11/16 to 33/8		1/2	4 MT	21/2 to 31/2	24.00	45.00	46-C	9.00	30.00	46-H
136 - 11/2	11/2 to 41/2		1/2	4 *MT or 5 MT	31/2 to 41/2	35.00	60.00	47-C	12.00	37.00	47-H
152 - 2"	2 to 51/4		1/3	4* MT or 5 MT	41/2 to 51/2	40.00	75.00	48-C	14.00	49.00	48-H

Extra Dowel Pins for Model 44, 45; 46, 47, 48 — Hardened and Ground:  $\frac{14''}{4} = 35c$  Each,  $\frac{1}{2}$  =  $\frac{1}{2$ 

Models No. 41B, 42B and 43B supersede original models No. 41, 41A, 42, 42A, 43 and 43A.

The actual minimum outside diameter cutting capacity of each tool is the size of the smallest pilot listed for that tool. However, to cut diameters smaller than the minimum capacities listed, it is necessary to grind off the

ends of the blades or use special blades ground to adjust to the required

size.

[Model No. 40 has one blade, high speed only, priced at \$1.00 each. To cut minimum diameter regrind radius.

"NOTE: Shank sizes marked with an asterisk will be shipped unless otherwise specified. Shank sizes not listed will be quoted on request.

SET NO. CS-1H consists of 4 COUNTERBORE SPOT FACERS NO. 40-H to 43B-H inclusive (HIGH SPEED blades) with assortment of 11 extra pilots, mounted in a convenient wood crib box. Outside diameter cutting range ½" to 13½".....\$50.65

PHOTS	(furnished on tool)		Extra Phots	
	102	103B	106B	114
	104B	104	107B	118
	105B	105B	108B	120
	112	106	109B	

SET NO. CS-2H consists of 6 COUNTERBORE SPOT FACERS NO. 40-H to 45-H inclusive (HIGH-SPEED blades), with assortment of 19 extra pilots, mounted in a convenient wood crib box. Outside diameter cutting range 1/4" to 21/2"....\$111.90

Pilots (furnished on tool)	Extra Pilots						
102 113	103B	106B	114	127	143		
104B 116	104	107B	118	131	147		
105B	105B	108B	120	135	151		
112	106	109B	123	139			

SET NO. CS-2C is the same as Set No. CS-2H but tools are equipped with CAST ALLOY SUPER HIGH-SPEED blades except No. 40-H which has regular high-speed blades. Outside diameter cutting range ½" to 2½".....\$142.90



Facing 51/2" Diameter in Casting on Heavy Drill Press



Spotfacing 9/16" Diameter in Steel on Light Drill Press

#### NON-BURRING PILOTS FOR CLARK COUNTERBORES AND SPOT FACERS, HARDENED AND GROUND

Pilot No.	Pilot Dia.	Hole Size	For Tool Number	Price Each	Pilot No.	Pilot Dia.	Hole Size	For Tool Number	Price Each	Pilot No.	Pilot Dia.	Hole Size	For Tool Number	Price Each
101 102 103 103A 103B 104A 104B 105 105 106A 105B 106 106A 106A 106A 107 107A 108B 109 109A 109B 110A 110B 1110B		· Pininininininininininininininininininin	40		114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143	5-1-5-4-20-5-20-6-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	41, 42, 43, 44 41, 42, 43, 44 42, 43, 44, 44 42, 43, 44, 44 42, 43, 44, 45 43, 44, 45 43, 44, 45 46 43, 44, 45 46 43, 44, 45 46 43, 44, 45 46 43, 44, 45 46 43, 44, 45 46 44 48 45 46 44 48 45 46 48 47 44 48 45 46 47 44 48 45 46 47 44 48 45 46 47 44 48 45 46 48 47 44 48 45 46 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 48 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47 44 48 45 46 46 47	480 580 51.00 51.00 51.20 1.50 1.50 1.50 1.80 1.80 1.80 1.80 2.20 2.20 2.20 2.50 2.50 3.00 3.00 3.50 3.50 3.50				44 & 45 46 & 47 48 & 45 46 & 47 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 45 46, 47 & 48 46, 47 47 48 48 48, 48, 48 48, 48, 48 48 48, 48 48, 48 48 48, 48 48 48, 48 48 48, 48 48 48, 48 48 48, 48 48 48, 48 48 48, 48 48 48, 48 48 48 48 48 48 48 48 48 48 48 48 48 4	4.00 4.00 4.00 4.50 4.50 4.50 5.00 5.00
112	1/2	1/4	41, 42, 43, 44 41, 42, 43, 44		145	113	1/2	44 & 45 46 & 47		Order			specify tool number will be used.	inder with

Form No. J2-1-46 Set No. CS-1H \$50.65